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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,144	09/21/2006	Miha Fuderer	PHNL040346US	4947

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
595 MINER ROAD
CLEVELAND, OH 44143

EXAMINER

FETZNER, TIFFANY A

ART UNIT	PAPER NUMBER
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2859

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11/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,144	Applicant(s) FUDERER ET AL.	
	Examiner Tiffany A. Fetzner	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/21/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/21/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement(s) (IDS)'s submitted on **9/21/2006** is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement. The initialed and dated information disclosure statement(s) (IDS)'s submitted on **9/21/2006** is attached to this Office action.

Drawings

3. The drawings are objected to because: A) with respect to **figure 2, the cavity component 2** is not referred to [**See page 6 line 32-page 7 line 10**] B) with respect to **figure 3, the patient component 3** is not referred to [**See page 7 lines 11-15**].
Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Amended Claims 1-7, and 11-13** are rejected under 35 U.S.C. 102(b) as being anticipated by **Jesmanowicz et al.**, US patent **6,294,972 B1** issued September 25th 2001.

6. With respect to Amended **Claim 1**, **Jesmanowicz et al.**, teaches and shows "A system for magnetic resonance imaging" [See figure 1, col. 1 lines 9-13; col. 2 line 50 through col. 4 line 53] , "comprising: a substantially cylindrical cavity" [See cylindrical bore tube 12]; "wherein the cavity has an axis of symmetry in the direction of a z-axis;" [See figure 1] "wherein a subject can be examined within the cavity;" [See figure 1 patient subject 14] "wherein the subject has a conductance which is not isotropic in an xy-plane which is perpendicular to the z-axis;" [See col. 3 lines 4-15 as one example of this teaching. The examiner notes that variations in magnetic field strength caused by common anatomic characteristics of the subjects imaged, is an implicit teaching that a patient's conductance is not isotropic, because an isotropic patient conductance would result in a continuous, homogeneous, non-varying magnetic field strength across the patient.] "wherein an electrically conductive material" (i.e. shim assembly 32 constructed of a rectangular sheet of Mylar foil 70 with a thickness of 0.125mm and an element matrix of 30x24) "is placed within the cavity" [See figures 3, 4, 2 and 1 in combination], "wherein the material has a conductivity and a thickness which render the total conductance in the xy-plane within the cavity to be isotropic" (i.e. rectangular sheet of Mylar foil 70 with a thickness of 0.125mm is designed to cancel out the variations in the strength of the magnetic field and make it homogeneous, so that the field inside the cavity including the patients anatomy is uniform/homogeneous; this is a synonymous way of stating that the conductance is isotropic (i.e. uniform across) the cavity

containing the patient. [See the abstract, figures 1 through 9B, col. 1 line 9 through col. 13 line 8.]

7. With respect to Amended **Claim 2, Jesmanowicz et al.**, teaches and shows "wherein the system is a magnetic resonance imaging apparatus or a radio frequency (RF) coil for magnetic resonance imaging." [See the abstract, figures 1 through 9B col. 1 lines 9-13; col. 2 line 50 through col. 4 line 53] The same reasons for rejection, which apply to **claim 1** also apply to **claim 2** and need not be reiterated.

8. With respect to Amended **Claim 3, Jesmanowicz et al.**, shows that "at least a part of the material (component 70 and assembly 32) "is attached to an inner wall of the cylindrical cavity" [See figures 1, 3, 4, and 8 in combination with one another]. The same reasons for rejection, which apply to **claims 1, 2**, also apply to **claim 3** and need not be reiterated.

9. With respect to Amended **Claim 4, Jesmanowicz et al.**, shows that "at least a part of the material (component 70 and assembly 32) "is attached to a bottom of a substantially plane surface on which the subject can be positioned." [See figure 2] The same reasons for rejection, which apply to **claim 1** also apply to **claim 4** and need not be reiterated.

10. With respect to Amended **Claim 5, Jesmanowicz et al.**, shows that the "substantially plane surface" (i.e. component 16) "is part of a patient's bed" [See figures 1 and 2 in combination with one another]. The same reasons for rejection, which apply to **claims 1, 4**, also apply to **claim 5** and need not be reiterated.

11. With respect to Amended **Claim 6, Jesmanowicz et al.**, teaches that the electrically conductive material is removably attached within the cavity." [See col. 6 lines 17-23.] The same reasons for rejection, which apply to **claims 1, 2, 3** also apply to **claim 6** and need not be reiterated.

12. With respect to Amended **Claim 7, Jesmanowicz et al.**, shows that the "material is substantially above and below a substantially plane surface on which the subject can be positioned" [See figures 1, 2, 3, and 4 in combination with one another from figure 2, component 70 is clearly shown positioned both above and below the patient being

imaged in the MRI system.] The same reasons for rejection, which apply to **claim 1** also apply to **claim 7** and need not be reiterated.

13. With respect to Amended **Claim 11**, **Jesmanowicz et al.**, teaches that the material is a sheet being covered by a conductive layer (i.e. the ferroshim inserts 72 which can be inserted on the 30x24 element matrix). [See col. 5 line 9 through col. 6 line 23] The same reasons for rejection, which apply to **claim 1** also apply to **claim 11** and need not be reiterated.

14. With respect to Amended **Claim 12**, **Jesmanowicz et al.**, teaches and shows from figures 3 and 4 that only predetermined parts of the sheet are covered by a conductive layer (i.e. the ferroshim inserts 72 which can be inserted on the 30x24 element matrix). [See the abstract, col. 5 line 44 through col. 13 line 8, as this is a key aspect of the **Jesmanowicz et al.**, invention.] The same reasons for rejection, which apply to **claims 1, 11** also apply to **claim 12** and need not be reiterated.

15. With respect to Amended **Claim 13**, **Jesmanowicz et al.**, teaches that it is arranged to operate with magnetic fields at or above 3 Tesla." [See col. 4 lines 21-25] The same reasons for rejection, which apply to **claim 1** also apply to **claim 13** and need not be reiterated.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. **Amended Claims 8-10** are rejected under **35 U.S.C. 103(a)** as being unpatentable over **Jesmanowicz et al.**, US patent **6,294,972 B1** issued September 25th 2001.

20. With respect to Amended **Claims 8-10**, **Jesmanowicz et al.**, lacks directly teaching that "that the material (i.e. the Mylar foil 70) has a planar resistance between about: "5 Ω and about 20 Ω (i.e. **claim 8**) "the material above the subject has a planar resistance between about 5 Ω and about 10 Ω (i.e. **claim 9**), or that "the material below the subject has a planar resistance between about 12 Ω and about 16 Ω " (i.e. **claim 10**), because **Jesmanowicz et al.**, lacks directly teaching the specific ranges of the planar resistance of the Mylar foil throughout the reference. However It would have been obvious to one of ordinary skill in the art at the time that the invention was made to use any range of planar resistance for the Mylar foil which was necessary according to the computer calculations to distribute the homogeneity of the magnetic field in a manner which results in the magnetic field strength becoming more homogeneous (i.e. this also intrinsically results in the patients' conductivity becoming more isotropic across the cavity, since the patients' presence is no longer causing variations in the magnetic field), therefore the applicant's ranges of planar resistance, would have been obvious to try given the computed multi-parameter placement of the Mylar foil material, and therefore the ranges themselves are not a novel or nonobvious advancement over the know prior


art of **Jesmanowicz et al.** The same reasons for rejection, which apply to **claims 1, 7** also apply to **claims 8-10** and need not be reiterated.

Conclusion

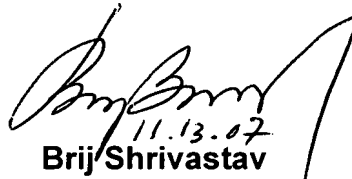
21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday, Wednesday, and Friday-Thursday from 7:00am to 2:10 pm., and on Tuesday and Thursday from 7:00am to 5:30pm.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Dean Reichard**, can be reached at (571) 272-1984. The **only official fax phone number** for the organization where this application or proceeding is assigned is **(571) 273-8300**.

23. Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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